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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,536	07/29/2005	J. M. Shipton	124324	3543
25944	7590	12/31/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			EXAMINER LAVILLA, MICHAEL E	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/540,536

Applicant(s)

SHIPTON, J. M.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 7-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20050624.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION*****Election/Restrictions***

1. Applicant's election with traverse of Group I in the reply filed on 30 July 2007 is acknowledged. It is remarked that Group I only constitutes Claims 1-6 and does not include Claims 9-11, as is evident by the claimed subject matter notwithstanding the erroneous characterization in the Restriction Letter. The traversal is on two ground(s). Applicant argues that searching all claims would not entail a serious examining burden. This is not found persuasive because prima facie evidence that searching and examining all claim groups would constitute a serious burden is found in their separate classifications. Hence, Group I would be 428/632; Group II, 427/372.2; and Group III, 427/127. Applicant argues that In re Ochiai rejoinder is warranted. However, the elected product claim has not been found allowable, and the non-elected claims do not contain all of the limitations of an allowable product claim.
2. The requirement is still deemed proper and is therefore made FINAL.
3. Claims 7-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12 October 2007.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
5. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Regarding Claim 1, it is unclear what is meant by the phrase "phosphate-bonded ceramic". It is unclear whether this describes any material formed or formable by reacting a source of phosphoric acid and/or phosphate compound and a source of ceramic-forming metal oxide, any material comprised of phosphate and metal atom, any mineral phosphate, any material that contains phosphate groups and metal/oxygen bonding, or something else. It is unclear whether the term "bonded" and/or "binder" can describe compound of phosphate wherein individual phosphate groups are present or whether "bonded" and/or "binder" means that an agglomeration of phosphate material bonds to agglomerations of metal oxide material.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
9. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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11. Determining the scope and contents of the prior art.
12. Ascertaining the differences between the prior art and the claims at issue.
13. Resolving the level of ordinary skill in the pertinent art.
14. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi USPN 5,569,336. Takahashi teaches coating RE-TM acicular particles that form a permanent magnet with aluminum phosphate and agglomerating these particles in a binder. See Takahashi (Abstract; Figures 1-3; col. 2, lines 26-54; col. 6, line 15 through col. 7, line 58; and Claims 1-5).

Takahashi suggests including Sm in the magnetic material and suggests coating with metal oxide ceramic binder. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a magnetic material having Sm and a coating of metal oxide ceramic binder since Takahashi suggests that effective articles are made in this manner. Takahashi describes an alloy layer comprised of RE and TM elements. It would be expected that the curing of the phosphate and ceramic binder materials would result in "phosphate bonded ceramic."

16. Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiuchi et al. EP 1 032 000 A1. Nishiuchi et al. teaches high temperature permanent magnet that may contain Sm that is further coated with phosphate/metal oxide containing material as a protective layer. See Nishiuchi et al. (Abstract; and paragraphs 34, 47, 54-65; and Examples). It would have been obvious to one of ordinary skill in the art at the time of the invention to

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fabricate the magnet of Nishiuchi et al. with Sm as Nishiuchi et al. teaches that effective magnets may be made in this manner. The coating layer is described as being formed from phosphate/phosphoric acid compounds and metal/oxygen containing compounds. The resulting coating is described as containing metal, oxygen, and P, and so the resulting coating material would be expected to contain phosphate and metal/oxygen materials.

17. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiuchi et al. EP 1 032 000 A1 in view of Chen et al. in "Surface Reaction . . ." in IEEE Trans. in Magnetism (cited by Applicant). Nishiuchi et al. teaches high temperature permanent magnet that may contain Sm that is further coated with phosphate/metal oxide containing material as a protective layer. See Nishiuchi et al. (Abstract; and paragraphs 34, 47, 54-65; and Examples). It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the magnet of Nishiuchi et al. with Sm as Nishiuchi et al. teaches that effective magnets may be made in this manner. The coating layer is described as being formed from phosphate/phosphoric acid compounds and metal/oxygen containing compounds. The resulting coating is described as containing metal, oxygen, and P, and so the resulting coating material would be expected to contain phosphate and metal/oxygen materials. Nishiuchi et al. does not teach the claimed alloy, but does suggest alloys including the elements of those claimed. Chen teaches that the claimed alloys are effective high temperature permanent magnetic materials. See Chen (Table 1; and entire document). It

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would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the material of Nishiuchi with the material of Chen as Nishiuchi suggests a range of materials that includes those of Chen and as Chen suggests that these are effective high temperature permanent materials.

18. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiuchi et al. EP 1 032 000 A1 in view of Applicant's Admissions. Nishiuchi et al. teaches high temperature permanent magnet that may contain Sm that is further coated with phosphate/metal oxide containing material as a protective layer. See Nishiuchi et al. (Abstract; and paragraphs 34, 47, 54-65; and Examples). It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the magnet of Nishiuchi et al. with Sm as Nishiuchi et al. teaches that effective magnets may be made in this manner. The coating layer is described as being formed from phosphate/phosphoric acid compounds and metal/oxygen containing compounds. The resulting coating is described as containing metal, oxygen, and P, and so the resulting coating material would be expected to contain phosphate and metal/oxygen materials. Nishiuchi et al does not teach only partially coating or using as aerospace component. Applicant's Admissions teach that these types of materials are effective for aerospace components. See Specification (page 1, paragraph 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the material of Nishiuchi for such components since Applicant's Admissions suggest they are effective for this purpose. It would have been

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obvious to one of ordinary skill in the art at the time of the invention to apply the coating of Nishiuchi on only those sides in most need of protection, leaving other sides exposed.

***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached at 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa  
20 December 2007



MICHAEL E. LAVILLA PH.D.  
PRIMARY EXAMINER